REMARKS

Claims 1-32 were submitted for examination and remain in the case. Claims 1-4, 7, 8, 11-19, and 21-32 stand rejected by the Examiner. Claim 20 is allowed.

Claims 1-2, 15-19, 21 and 28-32 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Weinberger et al. (US PAT. 6,453,389 hereinafter Weinberger). Claims 3-4 and 22-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Weinberger in view of Tipley et al. (US PAT. 5,325,504 hereinafter Tipley). Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Weinberger in view of Kurokawa et al. (JP 04-367984 hereinafter Kurokawa). Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Weinberger in view of McNutt et al. (US PAT. 5,606,688 hereinafter McNutt). Claims 11-14 and 25-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Weinberger in view of Dixion et al. (US PAT. 4,490,782 hereinafter Dixion). The Office Action does not specifically address claims 5, 6, 9, 10, and 24. Applicant respectfully traverses the rejections of the claims of the present invention.

Initially, it may be instructive to review the invention described in the present application and the disclosures of the prior art. In general, the present application describes a system and method related to prefetching a stream of sequential data for a preexisting cache system. The present invention relies on remotely intercepting data requests and remotely modeling the dynamic operation of the preexisting cache system. The invention preschedules data prefetches without modification to the preexisting cache.

The present invention remotely models the operation of a preexisting cache. The remote model is used to predict a data element not resident in the cache that may subsequently be

requested. The invention selectively prestages the predicted data element in the cache. The present invention may be installed on an existing system not designed originally to support a prefetcher.

In contrast, Weinberger teaches a prefetcher (Weinberger 16, figure 1) that is designed and implemented as a component of a system architecture (Weinberger column 4, lines 50-52). Weinberger further teaches that a cache (Weinberger 14, figure 1) is closely coupled with a prefetcher (Weinberger column 4, lines 50-52).

Weinberger primarily teaches the building of a data structure of the accumulated stall time produced by cache misses (Weinberger column 2, lines 20 – 47, column 7, line 62 – column 8, line 59). Weinberger also teaches the traversing of this data structure to determine the memory lines to prefetch to a cache (Weinberger column 2, line 50 – column 4, line 11, column 8, line 60 – column 12, line 52).

With regard to the rejection of claim 1 under 35 U.S.C. § 102(e), Applicant respectfully asserts that Weinberger does not disclose each and every element of the claimed. Specifically, Weinberger does not disclose remote modeling of the dynamic operation of a cache as described in claim 1 of the present invention. Weinberger teaches a prefetcher (Weinberger 16 figure 1) designed and implemented to be closely coupled with a cache (Weinberger 14 figure 1, column 4, lines 50-52). Weinberger makes no mention of remotely modeling the dynamic operation of a cache. Weinberger also makes no mention of the remote modeling including providing a model of data elements stored within the cache. Applicant finds no definition or description in Weinberger of remote cache modeling sufficient to demonstrate the existence of all the elements of the present invention in prior art.

Anticipation under 35 U.S.C §102(e) requires that each and every element of the claimed invention be disclosed in the prior art. *Akzo N.V. v. United States International Trade Commission*, 1 USPQ 2d 1241, 1245 (Fed Cir. 1986). Further, anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *W.L. Gore & Associates v. Garlock, Inc.*, 220 USPQ 303, 313 (Fed Cir. 1983). Applicant respectfully asserts that every element of the present invention is not disclosed in a single prior art reference. In particular, Weinberger does not disclose remote modeling of a cache.
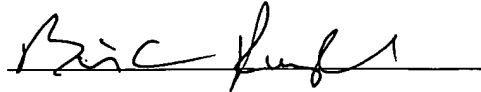
The Federal Circuit has held that prior art must disclose each and every element of the claim sufficiently to demonstrate its existence in the prior art. *Motorola, Inc. v. Interdigital Tech. Corp.*, 43 USPQ 2d 1481, 1490 (Fed Cir. 1997). Applicant finds no disclosure of remote modeling of a cache in the prior art. Consequently, Applicant respectfully asserts that the present invention is not anticipated under Weinberger.

Applicant's traversal of the rejections of independent claim 21 follows the same reasoning as presented above with respect to the rejection of claim 1. As a result of the presented remarks, Applicant asserts that independent claims 1 and 21 are in condition for prompt allowance. Applicant has not specifically traversed the rejections of dependent claims 2, 15-19, and 28-32 under 35 USC § 102(e) or the rejections of dependent claims 3-4, 7, 8, 11-14, 22-23, and 25-27 under 35 U.S.C. § 103(a), each of which depend from independent claims 1 and 21, but believes those claims to be allowable for depending from allowable independent claims.

Should additional information be required regarding the traversal of the rejections of the claims enumerated above, Examiner is respectfully requested to notify Applicant of such

required information. If any impediments to the prompt allowance of the claims can be resolved by a telephone conversation, the Examiner is respectfully requested to contact the undersigned.

Respectfully submitted,

Brian C. Kunzler
Reg. No. 38,527
Attorney for Applicants

Date: February 6, 2003
10 West 100 South
Suite 425
Salt Lake City, UT 84101
Telephone (801) 994-4646
Fax (801) 322-1054